REMARKS

Following the Applicants' response to the first claim rejection and the associated amendment of the claims then filed, the Examiner requested supplementation to more clearly specify those portions of the amended claims that distinguish from the art cited. The substance of this supplemental response, therefore, seeks to amplify and clarify the Applicants' earlier deficient submission as kindly noted by the Examiner.

More precisely, in response to the prior rejection the Applicants canceled the original claims 1-6 and 9-13, leaving only claims 7 and 8 and 14 through 19 in the case. Amongst these the only two remaining independent claims 7 and 14 have each been extensively amended to fully distinguish over the art cited. Focusing specifically on the the earlier response the Applicants note that independent claim 7, a claim reciting the method for automatically effecting securities trades, has been amended and recites in the added last two elements the further steps of displaying the ranges [bracketing intervals] of the price variation that correspond to a particular predicted probability of completing the trade and then effecting a trade order based on the selected price and the selected one of the price variation probability ranges. Similarly, independent claim 14, an apparatus claim reciting the distributed processing system which allows for the selection of the particular predicted probability range for effecting the trade based on the computed distributions of the autocorrelation function has been amended to positively recite the further structure of the selection means for selecting the desired bracketing functions. Thus both of the remaining independent claims have been amended to recite additional steps or structure,

claim 7 adding two further steps of displaying the bracketing intervals and effecting a trade order that specifies one of the displayed intervals while claim 14 adds the selection detail.

Referring directly to the text of the amended claim 7 the following further elements, expressed here also in the prescribed amendatory format, were added:

" Claim 7 ...
accumulating said correlation coefficients to produce a distribution thereof; ~~and~~
converting said distribution to a normal distribution;
displaying bracketing intervals corresponding to the various probabilities of said normal distribution; and
effecting a securities trade order by selecting a price together with a selected one of said bracketing intervals." (Claim 7, last six lines, as currently amended)

Similarly, the amended text of claim 14 provides:

" Claim 14 ...
said instruction sequences including a first computation sequence for conforming said first or second processor to compute the autocorrelation distribution function based on said delay of the price of a selected one of said securities and displaying on said second video display said distribution function in the form of bracketing intervals ~~displaying~~ according to the statistical distribution ~~of the correlation coefficients~~ thereof and a second instruction instruction sequence for conforming said first processor to match a transaction order in said processing console with another transaction order; and
selection means included in said processing console for allowing manual selection of one of said bracketing intervals for modifying a selected price within the prices comprising said distribution function."
(Claim 14, last eleven lines, as currently amended.)

Accordingly, both the remaining independent claims recite either the further steps or the structure by which the probability of the settling price distribution is displayed as a bracketed range, e.g., one standard deviation price range, two standard deviations price range, etc., and the buyer or seller then selects the probability bracket for his or her order.

As will be shown below no prior art reference cited in the prior rejection teaches, mentions or even suggests this totally novel securities trading procedure. Stated otherwise, the Applicants propose a wholly novel securities trading format in which the security investor specifies the price range within which he or she is willing to consummate the contract, selecting this price bracket with the help of a computer implemented autocorrelation process that advises the investor of the probability of consummating the order within this spread.

The Examiner is respectfully invited to note that this same continuously running computation process of the statistical price distribution at a later time, with the time delay set by the current lag time between the placement of an order and its consummation, is in itself an extremely powerful indicator of any unnatural processes. Thus the various riggings of a stock price by some mobster, inside information dealer or price manipulating broker are immediately disclosed by a jump in this bracketing spread since any stock price manipulation, in order to be profitable, must entail a substantial number of trades of a particular security. The inventive process, therefore, discloses to the informed trader those securities which the criminals are cluttering with their rigging attempts, relegating these manipulations to the ranks of trivia.

The Examiner is further invited to take official (judicial) notice that two of the Applicants are former United States Attorneys. See, e.g., the National Association of Former US Attorneys web site at www.nafusa.org/newsletter_12_02.pdf in which Applicants Jack Selden and Mahlon Brown are both shown. From their vantage these

various dim-witted stock riggings don't just have a consequence on the securities price but are then also followed by mountains of appellate record dealing with minutia in Miranda warnings, jury instructions, disclosures of 'exculpatory' evidence, jury pool bias, and so on and on. Clearly, a mechanism that provides, even on a probability basis, an indication that something may be wrong will reduce this mountain, particularly where the mechanism also automates the contract consummation thus removing the human 'specialist' or clearing agent from the process.

In complete contrast the cited patent to Lupien summarizes their process as follows:

> "According to the present invention, data concerning a portfolio or set of security holdings resides on computer files. **These files include**, among other variables, each client's current and "normal" holdings for each security and its identification data, **together with estimates of each security's price variability**, cash flows, and a number of investment characteristics such as industry and sector exposures, earnings/price and debt/equity ratios, etc. **The computer also holds instructions concerning the maximum and minimum cash positions designated by the client** and the deviations allowed from the base portfolio's individual sector, industry and security weightings which may also be determined by the client. Through real time analysis of the data, the present invention tracks how close the security, sector, and the overall portfolio is to the limits designated by the client. **To the extent that the limits have not been reached, the present invention will issue buy and/or sell orders as a function thereof as well as the security's volatility, current price and recent price history.** ..." Lupien at col. 3, lines 15-34, emphasis added.

Thus directly in its summary alone Lupien admits that the 'estimates' of price variability are stored in the portfolio files and clearly not computed on a current basis. As we have previously noted these buy and/or sell orders, according to Lupien, are then averaged **for settlement by the clearing agent at the end of the day**. (col. 4, lines 32 -41) Thus

Lupien neither teaches nor suggests the automated process recited by the applicants. As the Applicants have also noted earlier, Lupien also recognizes that offsetting orders placed internally within the system can be immediately settled (col. 11, lines 51-55) but thereafter recognizes the problem that the Applicants address as a source of undesirable and unexpected results to be solved by manual intervention. Applicants, therefore, repeat once more Lupien's express recognition of the problem and manual solution proposed:

> "For orders that have been placed outside of the system due to direct connection with automated brokers and/or exchanges, such as INSTINET and the CINCINNATI Stock Exchange, through external data terminal 22, the speed of the cancellation or altering process depends on the response time of these other computers. By comparison, orders placed on other electronic routing systems, such as the Designated Order Turnaround (DOT) system of the New York Stock Exchange, for example, although entered by computer, still generally depend for execution on human specialists or traders who must ultimately react to the order. **Hence, undesirable and unexpected results are inherent**. This invention removes such problems. **Manual alteration of orders, although not usual due to the speed of operation of the system and the reliance on trading algorithms, is also available to clients at step 42**."
> (col. 11, at lines 26 through 37, emphasis added)

Thus Lupien knows of the problem but offers no solution for it other than human alteration of the order.

Thus Lupien recognizes the problem addressed by the Applicants, but then wholly omits any solution except to suggest manual intervention by providing a manual override. No computer assistance for this manual process is even suggested and, in fact, the notion of a manual input is stated to be 'unusual' in light of the speed of the system.

Bekaert, similarly, while proposing autocorrelation as a useful tool for analyzing these future trends of a security does not teach nor suggest the use of the autocorrelation process to define the trade order. Accordingly, neither Lupien nor Bekaert disclose or suggest the structure and process now included in the claims.

The Applicants are mindful that a claimed invention is obvious if the differences between the invention and the prior art

> " ... are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." *Graham v. John Deere Co.*, 383 U.S. 1, 14, 148 USPQ 459, 465 (1966).

This question of law is based on **factual determinations** that include: (1) the explicit and inherent scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18, 148 USPQ at 467.

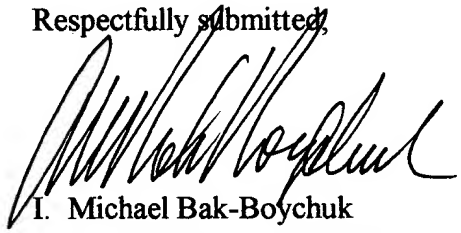
As the Applicants argued earlier the rigor of this factual examination during the prosecution of a patent has had recent attention from our Supreme Court in *Dickinson v.Zurko*, 527 U.S. 150, 119 S.Ct. 1816, 50 USPQ2d 1930 (1999) which concluded that the evidentiary standard is set by the Administrative Procedure Act and reversal is mandated if the ruling is not supported by substantial evidence. Accordingly some evidence needs to exist in the record supporting the conclusion of obviousness, and there must be some teaching in the cited art either suggesting or describing the steps and the structure now claimed.

We are mindful that the Examiner, by the very nature of her profession and exposure, possesses a level of expertise that is at the forefront in the art and matters that the Examiner may deem obvious are not necessarily obvious to those skilled in the art. For these and other reasons the need for record support, and not just the Examiner's expertise, has been particularly focused by the Federal Circuit when it considered *Zurko* on remand, by specifically demanding a record on appeal on the core issues of patentability, adopting the text from *Baltimore & Ohio R.R. Co. v. Aberdeen & Rockfish R.R. Co.*, 393 U.S. 87, (1966) which states:

> "[t]he requirement for administrative decision based on substantial evidence and reasoned findings -- which alone make judicial review possible – would become lost in a haze of so-called expertise" [393 U.S. at 92]

For all the foregoing reasons and those articulated earlier reconsideration of the rejection is respectfully sought.

Respectfully submitted,



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